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(12) INTERNATIONAL APPLICATION PUBLISHED UNDER THE PATENT COOPERATION TREATY (PCT)

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(54) Title: METHOD END DEVICE FOR SOURCE DECODING A VARIABLE-LENGTH SOFT-INPUT CODEWORDS SEQUENCE
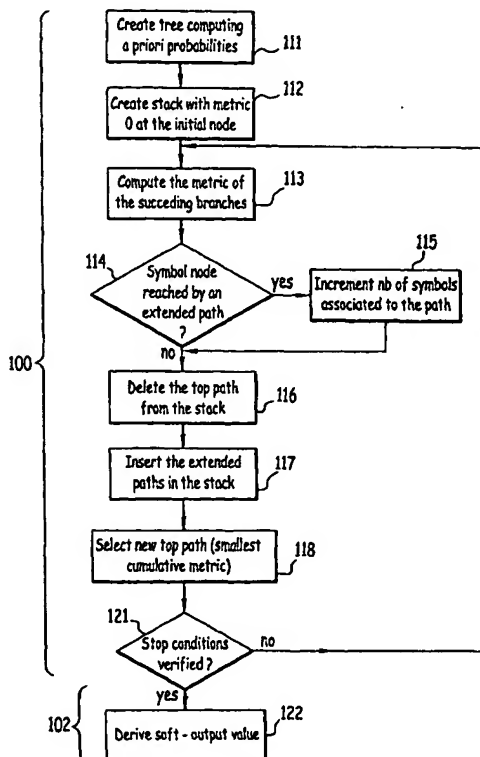
(57) Abstract: The invention concerns a method for source decoding a variable-length soft-input codewords sequence (y [1: T]) into a soft-output bit sequence (Lv [1: T]),the variable-length soft-input input codewords sequence (y [1: T]) encoded in accordance with a VLC codewords table.It comprises- a first stage (100) of implementing a stack decoding algorithm for a sequential estimation of an hard-output bit sequence of said variable length soft-input codewords sequence, including storage of intermediate data contained in the stack and generated by the stack decoding algorithm ; and- a second subsequent stage (102) of post-processing the stored intermediate data for generating the soft-output bit sequence (Lv [1: T]), a soft-output (L(x [t])) being provided for each bit.

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ES, FI, FR, GB, GR, HU, IE, IT, LU, MC, NL, PT, RO, SE, SI, SK, TR), OAPI patent (BF, BJ, CF, CG, CI, CM, GA, GN, GQ, GW, ML, MR, NE, SN, TD, TG).

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**Published:**

— *with international search report*

**A. CLASSIFICATION OF SUBJECT MATTER**

IPC 7    H03M13/45    H03M7/30    H03M7/40    H03M13/00

According to International Patent Classification (IPC) or to both national classification and IPC

**B. FIELDS SEARCHED**

Minimum documentation searched  (classification system followed by classification symbols)

IPC 7    H03M

Documentation searched other than minimum documentation to the extent that such documents are included  in the fields searched

Electronic data base consulted during the  international search (name of data base and,  where practical, search terms used)

EPO-Internal, PAJ, INSPEC, WPI Data

**C. DOCUMENTS CONSIDERED TO BE RELEVANT**

| Category° | Citation of document, with indication,  where appropriate, of the relevant passages | Relevant to claim No. |
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[X]  Further documents are listed in the  continuation of box C.

[X]  Patent family members are listed in annex.

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| Date of the actual completion of the international search | Date of mailing of the international search report |
|---|---|
| 26 November 2003 | 10/12/2003 |

| Name and mailing address of the ISA | Authorized officer |
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| European Patent Office, P.B. 5818 Patentlaan 2<br>NL – 2280 HV Rijswijk<br>Tel. (+31-70) 340-2040, Tx. 31 651 epo nl,<br>Fax: (+31-70) 340-3016 | Rydyger, K |

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